



US 20190154848A1

(19) **United States**(12) **Patent Application Publication****Luo et al.**(10) **Pub. No.: US 2019/0154848 A1**(43) **Pub. Date: May 23, 2019**(54) **¹⁴C TESTING BOTTLE, TESTING DEVICE
AND METHOD, SAMPLING AND
PREPARATION SYSTEM AND METHOD****G01T 1/208** (2006.01)**G01N 21/76** (2006.01)(52) **U.S. Cl.****CPC** **G01T 1/2002** (2013.01); **G01N 21/76**
(2013.01); **G01T 1/208** (2013.01); **G01T 1/204**
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Wang, Hangzhou (CN)(21) Appl. No.: **15/858,523**(22) Filed: **Dec. 29, 2017**(30) **Foreign Application Priority Data**

Nov. 20, 2017 (CN) 201711154536.9

Publication Classification(51) **Int. Cl.****G01T 1/20** (2006.01)**G01T 1/204** (2006.01)

(57)

ABSTRACT

A ¹⁴C testing bottle, a ¹⁴C testing device, a ¹⁴C testing method, a sampling and preparation system and its implementation method are provided. The ¹⁴C testing bottle includes a pressure-bearing shell and a sample bin positioned in the pressure-bearing shell. A cavity is arranged in the sample bin and the ¹⁴C testing bottle is provided with an injection port connected to the cavity. The sample bin may diffuse the light produced in the cavity and at least part of the sample bin is transparent. An optical fiber channel is set on the pressure-bearing shell. One end of the optical fiber channel is connected with an external scintillation counter, and the other end of the optical fiber channel is connected with the transparent part of the sample bin. The ¹⁴C testing bottle may measure the ¹⁴C content in the carbon dioxide sample rapidly.